L	Hits	Search Text	DB	Time stamp
Number		_ · · · · · · · · · · · · · · · · · · ·		11 me Scamp
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L		((DETERMINANT OR EPITOP\$6).TI,AB,CLM.))		

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			US-PGPUB;	14:08
			EPO;	
			DERWENT	
4	212179	fragment	USPAT;	2004/08/26
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8	561251	segment	USPAT;	2004/08/26
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r		((424/131.1).CCLS.)	US-PGPUB;	14:06
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Page 1

SEARCH
FOR
MELITTIN
PERTIDE
#2

=> fil reg.

FILE 'REGISTRY' ENTERED AT 09:31:28 ON 26 AUG 2004
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STRUCTURE FILE UPDATES: 24 AUG 2004 HIGHEST RN 732209-96-0 DICTIONARY FILE UPDATES: 24 AUG 2004 HIGHEST RN 732209-96-0

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

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Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que 12

L1 30 SEA FILE=REGISTRY ABB=ON PLU=ON WIKRKRQQG/SQSP L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON L1 AND 9/SOL

- open - exact (closed)

=> d his

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FILE 'REGISTRY' ENTERED AT 09:22:46 ON 26 AUG 2004

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L2 1 S L1 AND 9/SQL

L3 29 S L1 NOT L2

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L4 1 S L2

L5 11 S L3

L6 11 S L4, L5 AND ?MELITTIN?

L7 2 S L4, L5 AND (COUTTS S? OR BARSTAD P? OR IVERSON ? OR JONES D?)/

L8 2 S L4, L5 AND (LAJOLLA? OR LA JOLLA?)/PA, CS

L9 2 S L4,L5 AND (US20030103990 OR US60600056 OR US5268454)/PN

L10 2 S L7-L9

L11 6 S L4, L5 AND (PY<=1990 OR PRY<=1990 OR AY<=1990)

L12 6 S L4, L5 AND (PY<=1991 OR PRY<=1991 OR AY<=1991)

L13 4 S L11, L12 NOT L10

L14 1 S L4 AND L5-L13

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FILE 'REGISTRY' ENTERED AT 09:31:28 ON 26 AUG 2004

=> d sqide can 12

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN

RN 181469-64-7 REGISTRY

CN Glycine, N-[N2-[N2-[N2-[N2-[N2-(N-L-tryptophyl-L-isoleucyl)-L-lysyl]-L-arginyl]-L-lysyl]-L-arginyl]-L-qlutaminyl]-L-glutaminyl]- (9CI) (CA INDEX

NAME)

PROTEIN SEQUENCE; STEREOSEARCH FS

SQL9

SEQ 1 WIKRKRQQG

1-9 HITS AT:

MF C53 H90 N20 O12

SR

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological

study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

NH₂

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 125:219609

=> fil uspatall

FILE 'USPATFULL' ENTERED AT 09:31:39 ON 26 AUG 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 09:31:39 ON 26 AUG 2004 CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> d bib abs hitstr 115

ANSWER 1 OF 1 USPATFULL on STN L15

AN 96:80258 USPATFULL

ΤI Chemically-defined non-polymeric valency platform molecules and

conjugates thereof

IN Coutts, Stephen M., Rancho Santa Fe, CA, United States Jones, David S., San Diego, CA, United States Livingston, Douglas A., San Diego, CA, United States Yu, Lin, San Diego, CA, United States

La Jolla Pharmaceutical Company, San Diego, CA, United States (U.S. PAcorporation)

PΙ US 5552391

19960903

ΑI US 1993-152506 19931115 (8)

RLI Continuation-in-part of Ser. No. US 1992-914869, filed on 15 Jul 1992, now patented, Pat. No. US 5276013 which is a continuation-in-part of Ser. No. US 1990-494118, filed on 13 Mar 1990, now patented, Pat. No. US 5162515, issued on 10 Nov 1992 which is a continuation-in-part of Ser. No. US 1990-466138, filed on 16 Jan 1990, now abandoned And a continuation-in-part of Ser. No. US 1993-118055, filed on 8 Sep 1993 which is a continuation-in-part of Ser. No. US 1991-652648, filed on 8 Feb 1991, now patented, Pat. No. US 5268454

DT Utility FS Granted

Primary Examiner: Rollins, John W. EXNAM

LREP Morrison & Foerster CLMN Number of Claims: 12

Exemplary Claim: 1 DRWN 16 Drawing Figure(s); 16 Drawing Page(s)

LN.CNT 3038

ECL

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Chemically-defined, non-polymeric valency platform molecules and AΒ conjugates comprising chemically-defined valency platform molecules and biological or chemical molecules including polynucleotide duplexes of at least 20 base pairs that have significant binding activity for human lupus anti-dsDNA autoantibodies.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 181469-64-7DP, conjugates

(chemical-defined non-polymeric valency platform mols. and conjugates with polynucleotide or melittin as toleragen for autoimmune disease or systemic lupus erythematosus or bee venom)

RN181469-64-7 USPATFULL

Glycine, N-[N2-[N2-[N2-[N2-[N2-[N2-(N-L-tryptophyl-L-isoleucyl)-L-lysyl]-L-CN arginyl]-L-lysyl]-L-arginyl]-L-glutaminyl]-L-glutaminyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

restant
put family

 \sim NH₂

=> fil hcaplus FILE 'HCAPLUS' ENTERED AT 09:31:49 ON 26 AUG 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 26 Aug 2004 VOL 141 ISS 9 FILE LAST UPDATED: 25 Aug 2004 (20040825/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr 114

L14 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:577842 HCAPLUS

DN 125:219609

ED Entered STN: 28 Sep 1996

TI Chemically-defined non-polymeric valency platform molecules and conjugates thereof

IN Coutts, Stephen M.; Jones, David S.; Livingston, Douglas A.; Yu, Lin

PA La Jolla Pharmaceutical Company, USA

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SO
     U.S., 59 pp., Cont.-in-part of U.S. 5,276,013.
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     ICS C07H019-00; C07H019-04
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US 1993-142598 A 19931022

US 1993-152506 A 19931115

EP 1993-309288 A 19931122

JP 1993-298747 A3 19931129

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WO 1994-US10031 W 19940908

US 1995-453254 A3 19950530

US 1996-769041 A1 19961219
CLASS
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    Chemical-defined, non-polymeric valency platform mols. and conjugates
     comprising chemical-defined valency platform mols. and biol. or chemical mols.
     including polynucleotide duplexes of at least 20 base pairs that have
     significant binding activity for human lupus anti-dsDNA autoantibodies.
     The polynucleotide duplex-containing conjugates are useful as toleragen for
     treating human autoimmune disease or systemic lupus erythematosus. In
     example, chemical-defined valency platform mols. were synthesized, conjugated
     with polynucleotide (PN) and hemagglutinin or sheep red blood cell, and
     used as toleragen to reduce PN-specific antibody-producing cells.
     Similarly, conjugates of the platform mols. and melittin
     peptides were prepared for inducing tolerance mice to melittin.
     toleragen nonpolymeric valency platform mol conjugate; polynucleotide
ST
     hemagglutinin conjugate toleragen lupus erythematosus; melittin
     conjugate bee venom toleragen
IT
     Immune tolerance
     RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
         (-inducing agent; chemical-defined non-polymeric valency platform mols.
        and conjugates with polynucleotide or melittin as toleragen
        for autoimmune disease or systemic lupus erythematosus or bee venom)
     Antibodies
TT
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (-producing cells; chemical-defined non-polymeric valency platform mols.
        and conjugates with polynucleotide or melittin as toleragen
        for autoimmune disease or systemic lupus erythematosus or bee venom)
ΙT
         (bee; chemical-defined non-polymeric valency platform mols. and conjugates
        with polynucleotide or melittin as toleragen for autoimmune
        disease or systemic lupus erythematosus or bee venom)
IT
     Autoimmune disease
     Lupus erythematosus
     Protein sequences
         (chemical-defined non-polymeric valency platform mols. and conjugates with
        polynucleotide or melittin as toleragen for autoimmune
        disease or systemic lupus erythematosus or bee venom)
     Deoxyribonucleic acids
TT
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (double stranded; chemical-defined non-polymeric valency platform mols.
```

and conjugates with polynucleotide or melittin as toleragen

for autoimmune disease or systemic lupus erythematosus or bee venom)

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IT
     Erythrocyte
         (sheep; chemical-defined non-polymeric valency platform mols. and
        conjugates with polynucleotide or melittin as toleragen for
        autoimmune disease or systemic lupus erythematosus or bee venom)
IT
     Antibodies
     RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (auto-, to double stranded DNA; chemical-defined non-polymeric valency
        platform mols. and conjugates with polynucleotide or melittin
        as toleragen for autoimmune disease or systemic lupus erythematosus or
        bee venom)
IT
     Agglutinins and Lectins
     RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (hemagglutinins, keyhole limpet; chemical-defined non-polymeric valency
        platform mols. and conjugates with polynucleotide or melittin
        as toleragen for autoimmune disease or systemic lupus erythematosus or
        bee venom)
     Nucleotides, biological studies
IT
     RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (poly-, conjugates, chemical-defined non-polymeric valency platform mols.
        and conjugates with polynucleotide or melittin as toleragen
        for autoimmune disease or systemic lupus erythematosus or bee venom)
IT
     20449-79-0, Melittin
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        polynucleotide or melittin as toleragen for autoimmune
        disease or systemic lupus erythematosus or bee venom)
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        disease or systemic lupus erythematosus or bee venom)
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169744-12-1P
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               169744-10-9P
                              169744-11-0P
169744-09-6P
                                              169744-19-8P
                                                             169744-20-1P
               169744-15-4P
                              169744~18-7P
169744-14-3P
               169744-22-3P
                              169744-25-6P
                                              169744-26-7P
                                                             169744-27-8P
169744-21-2P
                                                             181468-94-0P
181468-40-6P
               181468-45-1P
                              181468-78-0P
                                              181468-82-6P
                                                             181469-17-0P
181468-97-3P
                              181469-05-6P
                                              181469-09-0P
               181469-02-3P
181469-26-1P
               181469-44-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
   (chemical-defined non-polymeric valency platform mols. and conjugates with
   polynucleotide or melittin as toleragen for autoimmune
   disease or systemic lupus erythematosus or bee venom)
123168-46-7DP, conjugates 169744-35-8DP, conjugates
                                                         181469-59-0DP,
169744-36-9DP, conjugates
                            169744-37-0DP, conjugates
conjugates 181469-64-7DP, conjugates 181469-69-2DP,
conjugates 181469-73-8DP, conjugates 181469-77-2DP,
conjugates
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
   (chemical-defined non-polymeric valency platform mols. and conjugates with
   polynucleotide or melittin as toleragen for autoimmune
   disease or systemic lupus erythematosus or bee venom)
169744-35-8DP, conjugates 181469-64-7DP, conjugates
181469-69-2DP, conjugates 181469-73-8DP, conjugates
181469-77-2DP, conjugates
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)
   (chemical-defined non-polymeric valency platform mols. and conjugates with
   polynucleotide or melittin as toleragen for autoimmune
   disease or systemic lupus erythematosus or bee venom)
169744-35-8 HCAPLUS
Glycine, N-[N2-[N2-[N2-[N2-[N2-[N2-[N-(N-L-cysteinyl-L-tryptophyl)-L-]]]]
```

isoleucyl]-L-lysyl]-L-arginyl]-L-lysyl]-L-arginyl]-L-glutaminyl]-L-

Absolute stereochemistry.

glutaminyl] - (9CI) (CA INDEX NAME)

ΙT

IT

RN

CN

PAGE 1-A

PAGE 1-B

PAGE 2-B

RN 181469-64-7 HCAPLUS
CN Glycine, N-[N2-[N2-[N2-[N2-[N2-(N-L-tryptophyl-L-isoleucyl)-L-lysyl]-L-arginyl]-L-glutaminyl]-L-glutaminyl]-L-glutaminyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

RN 181469-69-2 HCAPLUS

CN Glycine, N-[N2-[N2-[N2-[N2-[N2-[N-(N-L-seryl-L-tryptophyl)-L-isoleucyl]-L-lysyl]-L-arginyl]-L-lysyl]-L-arginyl]-L-glutaminyl]-L-glutaminyl]-L-glutaminyl]-L-glutaminyl]-L-glutaminyl]-L-glutaminyl]-

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 2-B

RN 181469-73-8 HCAPLUS

CN Glycine, N-{N2-[N2-[N2-[N2-[N2-[N-[N-[N-[N-L-isoleucyl-L-seryl)-L-tryptophyl]-L-isoleucyl]-L-lysyl]-L-arginyl]-L-lysyl]-L-arginyl]-L-glutaminyl]-L-glutaminyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 2-A

RN 181469-77-2 HCAPLUS

CN Glycine, N-[N2-[N2-[N2-[N2-[N2-[N-[N-[N-[N-L-cysteinyl-L-isoleucyl]-L-scryl]-L-tryptophyl]-L-isoleucyl]-L-lysyl]-L-arginyl]-L-glutaminyl]-L-glutaminyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

~NH₂

0||

PAGE 2-B

=> s 110 not 114 L16

=> d all hitstr

L16

AN

DN

ED

ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN

1995:892826 HCAPLUS

124:290272

Entered STN: 03 Nov 1995

Preparation of chemically-defined nor and conjugates the ΤI and conjugates thereof.

Coutts, Stephen; Jones, David S.; Livingston, Douglas IN Alan; Yu, Lin

La Jolla Pharmaceutical Co., Can. PA

SO Eur. Pat. Appl., 76 pp.

CODEN: EPXXDW

Patent DT

English LA

ICM A61K047-48 IC

CC 34-3 (Amino Acids, Peptides, and Proteins) Section cross-reference(s): 1, 15, 33

FAN.CNT 8 APPLICATION NO. DATE KIND PATENT NO. DATE ______ _____ _____ _____ ----EP 1993-309720 19931203 PΙ EP 642798 A2 19950315 19980916 Α3 EP 642798 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE 20000509 US 1993-118055 19930908 <--A US 6060056 US 1993-152506 19931115 Α 19960903 US 5552391 Α 19930908 PRAI US 1993-118055 Α 19931022 US 1993-142598 Α 19931115 US 1993-152506 EP 1993-309288 Α 19931122

US	1990-466138	B2	19900116	
US	1990-494118	A2	19900313	
US	1991-652648	A2	19910208	
US	1992-914869	A2	19920715	
T 3 G G				

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
EP 642798	ICM	A61K047-48	
US 6060056	ECLA	A61K039/385; A61K047/48H4 <-	
US 5552391	ECLA	A61K039/385; A61K047/48H4; A61K047/48R2T; C07H021/00C4	į
GT			

Conjugates comprising biol. or chemical mols., including polynucleotide AB duplexes of at least 20 base pairs that have significant binding activity for human lupus anti-dsDNA autoantibodies, reacted with valency platforms G1(T1)n, G2[L2J2Z2(pT2)]m [G1, G2 = null, (branched) chain containing 1-2000 atoms selected from C, N, O, Si, P, S; T1, T2 = NHR, CONHNHR, NHNHR, CO2H, CO2R1, COX, SO2X, SH, OH, etc.; R = H, alkyl, cycloalkyl, aralkyl; R1 = N-succinimidyl, p-nitrophenyl, pentafluorophenyl, etc.; X = halo, other leaving group; L2 = null, O, NR, S; J2 = null, CO, CS; Z2 = radical containing 1-200 atoms selected from C, H, N, O, Si, P, S, and containing attachment sites for functional groups; n, m = 1-32; p = 1-8; with provisos], were prepared Thus, title conjugate (I; R = H-Trp-Ile-Lys-Arg-Lys-Arg-Gln-Gln-Lys-Cys-Gly-OH, bound through a cysteine S atom; n = approx. 74) (preparation given) at 1000 µg/mouse in mice primed and boosted with the parent protein melittin gave an 86.8% reduction in peptide specific plaque forming cells.

valency platform mol prepn conjugation; tolerogen conjugate valency platform mol; polyethylene glycol conjugate prepn tolerogen; peptide valency platform conjugate prepn tolerogen; dna valency platform conjugate prepn tolerogen; lupus treatment tolerogen conjugate

IT Immunosuppressants

(preparation of chemical-defined non-polymeric valency platform mol. conjugates

as tolerogens)

IT Antibodies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(preparation of chemical-defined non-polymeric valency platform mol. conjugates

for treating antibody-mediated pathologies)

IT Lupus erythematosus

(treatment of lupus with tolerogens)

IT Lymphocyte

(B-cell, conjugates for induction of B cell anergy to immunogens)

IT Deoxyribonucleic acids
 Peptides, preparation

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);

```
BIOL (Biological study); PREP (Preparation); USES (Uses)
        (conjugates, preparation of chemical-defined non-polymeric valency platform
        mols. and conjugates thereof)
     164910-21-8DP, keyhole limpet hemocyanin conjugate
IT
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); BIOL (Biological
     study); PREP (Preparation)
        (preparation of chemical-defined non-polymeric valency platform mols. and
        conjugates thereof)
IT
     154637-41-9P
                    169147-31-3P 169744-34-7P 175644-72-1P
                                  175644-75-4P
                                                 175864-44-5P
     175644-73-2P
                    175644-74-3P
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
     BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of chemical-defined non-polymeric valency platform mols. and
        conjugates thereof)
                                               175864-43-4
IT
                                 175705-42-7
     175705-40-5
                   175705-41-6
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (preparation of chemical-defined non-polymeric valency platform mols. and
        conjugates thereof)
                               79-08-3, Bromoacetic acid
     64-69-7, Iodoacetic acid
                                                             107-13-1,
IT
     2-Propenenitrile, reactions 115-77-5, Pentaerythritol, reactions
     124-09-4, 1,6-Hexanediamine, reactions
                                             142-73-4, Iminodiacetic acid
                                    535-87-5, 3,5-Diaminobenzoic acid
     150-13-0, p-Aminobenzoic acid
                              929-59-9
                                         2009-83-8, 6-Chlorohexanol
     821-41-0, 5-Hexen-1-ol
     17134-17-7, Triethyleneglycol bischloroformate
                                                       25322-68-3
                                                                    54907-61-8,
     Iodoacetic anhydride 55750-48-6, N-Methoxycarbonylmaleimide
     64325-78-6D, controlled pore glass-bound
                                                107949-93-9
                                                               164910-27-4
     169744-32-5
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of chemical-defined non-polymeric valency platform mols. and
        conjugates thereof)
IT
     1633-78-9P
                  2465-91-0P
                               5434-66-2P
                                           19199-82-7P
                                                          24991-53-5P
     31252-85-4P
                   32200-04-7P
                                 35164-96-6P
                                               35638-19-8P
                                                              38710-44-0P
                   66095-18-9P
                                 80901-86-6P
                                               82055-94-5P
                                                              85807-84-7P
     56074-20-5P
     113314-17-3P
                    148254-12-0P
                                   148254-13-1P
                                                  148254-14-2P
                                                                  148254-18-6P
     148254-19-7P
                    148254-21-1P
                                   154231-80-8P
                                                  159736-80-8P
                                                                  163032-98-2P
                                                  163778-64-1P
     163032-99-3P
                    163778-62-9P
                                   163778-63-0P
                                                                  164910-22-9P
     164910-24-1P
                    167362-46-1P
                                   169744-01-8P
                                                  169744-02-9P
                                                                  169744-03-0P
                                   169744-06-3P
                                                  169744-07-4P
     169744-04-1P
                    169744-05-2P
                                                                  169744-08-5P
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                                                  169744-12-1P
     169744-09-6P
                    169744-10-9P
                                                                  169744-13-2P
                    169744-15-4P
                                   169744-16-5P
                                                  169744-17-6P
     169744-14-3P
                                                                  169744-18-7P
     169744-19-8P
                    169744-20-1P
                                   169744-21-2P
                                                  169744-22-3P
                                                                  169744-23-4P
                    169744-25-6P
                                   169744-26-7P
                                                  169744-27-8P
                                                                  169744-28-9P
     169744-24-5P
     169744-29-0P
                    169744-30-3P
                                   169744-31-4P
                                                  169744-33-6P
                    169744-36-9P
                                   169744-37-0P
                                                  175707-64-9DP,
     169744-35-8P
     controlled pore glass-bound
                                   175864-40-1P
                                                  175864-42-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of chemical-defined non-polymeric valency platform mols. and
        conjugates thereof)
     169744-34-7P 175644-72-1P 175644-73-2P
IT
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
     BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of chemical-defined non-polymeric valency platform mols. and
        conjugates thereof)
     169744-34-7 HCAPLUS
RN
     Poly(oxy-1,2-ethanediyl), \alpha,\alpha'-(oxydi-2,1-
CN
     ethanediyl)bis[\omega-hydroxy-, 1,1'-diester with 3-[[2-[[4-[[[2-
```

(carboxyamino) ethyl] amino] carbonyl] phenyl] amino] -2-oxoethyl] dithio] -L-

Absolute stereochemistry.

PAGE 1-C

PAGE 1-D

PAGE 2-A

PAGE 2-B

$$\begin{array}{c|c} H \\ N \\ O \end{array}$$

PAGE 2-D

RN 175644-72-1 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-hydro-ω-hydroxy-, ester with
 1,1'-[[5-[[[2-(carboxyamino)ethyl]amino]carbonyl]-1,3 phenylene]bis[imino(2-oxo-2,1-ethanediyl)]]bis[L-cysteinyl-L-tryptophyl-L-isoleucyl-L-lysyl-L-arginyl-L-lysyl-L-arginyl-L-glutaminyl-L-glutaminyl-L-glutaminylglycine] (1:2) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 175644-73-2 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-, ester with 1,1'-[[5-[[[2-(carboxyamino)ethyl]amino]carbonyl]-1,3-phenylene]bis[imino(2-oxo-2,1-ethanediyl)]]bis[L-cysteinyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-L-lysyl-L-arginyl-L-lysyl-L-arginyl-L-glutaminylglycine] (1:2) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 169744-35-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of chemical-defined non-polymeric valency platform mols. and conjugates thereof)

RN 169744-35-8 HCAPLUS

CN Glycine, N-[N2-[N2-[N2-[N2-[N2-[N2-[N-(N-L-cysteinyl-L-tryptophyl)-L-isoleucyl]-L-lysyl]-L-arginyl]-L-lysyl]-L-arginyl]-L-glutaminyl]-L-glutaminyl]-L-glutaminyl]-L-

Absolute stereochemistry.

PAGE 1-A

H HN R SH

$$NH_2$$
 Me

 NH_2 Me

 NH_2 Me

 NH_3 SEt

 NH_4 NH

 NH_2 MH

 NH_2 MH

 NH_3 (CH2) 3

 NH_4 SH

 NH_4 NH

 NH_5 (CH2) 3

 NH_4 SH

 NH_5 (CH2) 3

 NH_6 (CH2) 4

 NH_7 NH

 NH_8 (CH2) 4

 NH_8 NH

 NH_8 (CH2) 4

PAGE 1-B

```
=> d l13 all hitstr tot
                                                              www.y
     ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
AΝ
     1997:49226 HCAPLUS
DN
     126:155047
ED
     Entered STN: 23 Jan 1997
     Antibiotic peptides containing D-amino acids
ΤI
IN
     Merrifield, Robert B.; Wade, David; Boman, Hans G.
     The Rockefeller University, USA
PΑ
SO
     U.S., 8 pp., Cont. of U.S. Ser. No. 87,143, abandoned.
     CODEN: USXXAM
DT
     Patent
     English
T<sub>1</sub>A
IC
     ICM A61K037-02
     ICS C07K014-00
NCL
     514012000
     10-5 (Microbial, Algal, and Fungal Biochemistry)
     Section cross-reference(s): 34
FAN.CNT 1
     PATENT NO.
                         KIND
                                 DATE
                                            APPLICATION NO.
                                                                     DATE
                                             -----
                         ----
                                -----
                                                                     -----
     US 5585353
                         Α
                                 19961217
                                            US 1994-307479
                                                                    19940916 <--
PRAI US 1990-474524
                                 19900202 <--
     US 1993-87143
                                19930706
CLASS
 PATENT NO.
                 CLASS PATENT FAMILY CLASSIFICATION CODES
 US 5585353
                 ICM
                        A61K037-02
                 ICS
                        C07K014-00
                        514012000
AΒ
     Antibiotically and/or antimalarially active enantiomers of naturally
     occurring antibiotics such as cecropins A, B, and D, melittin, magainins I
     and II, and their addition, deletion, and replacement analogs, including
     homologous and heterologous analogs thereof, synthesized from D-amino
     acids by solid-phase peptide synthesis are claimed.
ST
     antibiotic peptide enantiomer
IT
     Antibacterial agents
     Antimalarials
        (antibiotic peptides containing D-amino acids)
IT
     Peptides, biological studies
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); IMF (Industrial manufacture); PUR (Purification or
     recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
        (antibiotic peptides containing D-amino acids)
IT
     Amino acids, reactions
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (D-; antibiotic peptides containing D-amino acids)
     80451-04-3P, Cecropin A (Platysamia cecropia antibacterial peptide)
TT
     88845-02-7P
                   186384-16-7P · 186384-17-8P 186384-18-9P
                                                                  186384-19-0P
     186384-20-3P
                   186384-21-4P 186384-22-5P 186384-23-6P
     186384-24-7P 186384-25-8P 186384-26-9P 186384-27-0P
     186384-28-1P 186384-29-2P 186384-30-5P 186384-31-6P 186384-32-7P

      186384-33-8P
      186384-34-9P
      186384-35-0P
      186384-36-1P

      186811-39-2P
      186811-40-5P
      186811-41-6P
      186811-42-7P
      186811-44-9P

     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); IMF (Industrial manufacture); PUR (Purification or
     recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL
```

(Biological study); PREP (Preparation); USES (Uses) (antibiotic peptides containing D-amino acids)

IT 186384-24-7P 186384-25-8P 186384-33-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (antibiotic peptides containing D-amino acids)

RN 186384-24-7 HCAPLUS

CN

D-Leucine, D-leucyl-D-isoleucyl-D-seryl-D-tryptophyl-D-isoleucyl-D-lysyl-D-arginyl-D-lysyl-D-arginyl-D-glutaminylglycyl-D-isoleucylglycyl-D-alanyl-D-valyl-D-leucyl-D-lysyl-D-valyl-D-leucyl-D-threonylglycyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

PAGE 2-B

__Bu-i

PAGE 4-A

RN 186384-25-8 HCAPLUS

CN D-Lysine, D-leucyl-D-isoleucyl-D-seryl-D-tryptophyl-D-isoleucyl-D-lysyl-D-arginyl-D-lysyl-D-arginyl-D-glutaminyl-D-glutaminylglycyl-D-prolyl-D-alanyl-D-valyl-D-valylglycyl-D-glutaminyl-D-alanyl-D-al

threonyl-D-glutaminyl-D-isoleucyl-D-alanyl- (9CI) (CA INDEX NAME)
Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

PAGE 1-C

RN 186384-33-8 HCAPLUS

CN D-Serine, D-alanyl-D-leucyl-D-isoleucyl-D-seryl-D-tryptophyl-D-isoleucyl-D-lysyl-D-arginyl-D-lysyl-D-arginyl-D-glutaminyl-D-glutaminylglycyl-D-lysyl-D-alanyl-D-phenylalanyl-D-valylglycyl-D-α-glutamyl-D-isoleucyl-D-methionyl-D-lysyl- (9CI) (CA INDEX NAME)

 ${\tt Absolute \ stereochemistry.}$

PAGE 1-A

PAGE 3-B

PAGE 4-A

L13 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN

ΑN 1990:175449 HCAPLUS

DN 112:175449

ED Entered STN: 12 May 1990

ΤI Antibacterial and antimalarial properties of peptides that are cecropin-melittin hybrids

ΑU Boman, H. G.; Wade, D.; Boman, I. A.; Wahlin, B.; Merrifield, R. B.

CS Dep. Microbiol., Univ. Stockholm, Stockholm, S-10691, Swed.

SO FEBS Letters (1989), 259(1), 103-6

CODEN: FEBLAL; ISSN: 0014-5793

DT Journal

LA English

10-5 (Microbial Biochemistry) CC

Section cross-reference(s): 34

AB Solid-phase synthesis was used to produce 5 hybrid peptides containing sequences from the antibacterial peptide, cecropin A, and from the bee venom toxin, melittin. Four of these chimeric peptides showed good antibacterial activity against representative gram-neg. and gram-pos. bacterial species. The best hybrid, cecropin A(1-13)-melittin(1-13) was 100-fold more active than cecropin A against Staphylococcus aureus. It was also a 10-fold better antimalarial agent than cecropin B or magainin 2. Sheep red cells were lysed by melittin at low concns., but not by the hybrid mols., even at 50-fold higher concns.

ST cecropin melittin hybrid peptide antimalarial bactericide

IT Antibiotics Antimalarials

(cecropin-melittin hybrid peptide as)

IT 20449-79-0, Melittin 80451-04-3, Cecropin A

RL: BIOL (Biological study)

(hybrid peptide prepared from, antibacterial and antimalarial properties of)

IT 126339-11-5P 126437-52-3P 126437-53-4P 126463-95-4P

126463-96-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and antibacterial and antimalarial properties of)

IT 126463-96-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and antibacterial and antimalarial properties of)

RN 126463-96-5 HCAPLUS

CN L-Leucinamide, L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-L-lysyl-L-arginyl-L-glutaminyl-L-glutaminylglycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-L-lysyl-L-valyl-L-leucyl-L-threonylglycyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 2-A

PAGE 2-B

PAGE 4-A

L13 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1987:549380 HCAPLUS

DN 107:149380

ED Entered STN: 31 Oct 1987

TI Import of honeybee prepromelittin into the endoplasmic reticulum: structural basis for independence of SRP and docking protein

AU Mueller, Guenter; Zimmermann, Richard

CS Inst. Physiol. Chem., Univ. Muenchen, Munich, D-8000/2, Fed. Rep. Ger.

SO EMBO Journal (1987), 6(7), 2099-107

CODEN: EMJODG; ISSN: 0261-4189

DT Journal

LA English

CC 6-1 (General Biochemistry)
AB Honeybee prepromelittin is

Honeybee prepromelittin is correctly processed and imported by dog pancreas microsomes. Insertion of prepromelittin into microsomal membranes, as assayed by signal sequence removal, does not depend on signal recognition particle (SRP) and docking protein. The question as to how prepromelittin bypasses the SRP/docking protein system was addressed. Hybrid proteins between prepromelittin, or C-terminally truncated derivs., and the cytoplasmic protein dihydrofolate reductase from mouse were constructed. These hybrid proteins were analyzed for membrane insertion and sequestration into microsomes. The results suggest the following: (1) the signal sequence of prepromelittin is capable of interacting with the SRP/docking protein system, but this interaction is not mandatory for membrane insertion; this is related to the small size of prepromelittin. (2) In prepromelittin a cluster of neg. charged amino acids must be balanced by a cluster of pos. charged amino acids to allow membrane insertion. (3) In general, a signal sequence can be sufficient to mediate

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99:170598

Entered STN: 12 May 1984

membrane insertion independently of SRP and docking protein in the case of short precursor proteins; however, the presence and distribution of charged amino acids within the mature part of these precursors can play distinct roles. prepromellitin transport endoplasmic reticulum; signal recognition particle prepromellitin endoplasmic reticulum; docking protein prepromellitin endoplasmic reticulum Protein sequences (of prepromellitin-dihydrofolate reductase chimeric proteins) Endoplasmic reticulum (prepromellitin import by, signal recognition particle and docking protein independence of, structural basis for) Microsome (prepromellitin insertion into membrane of, signal recognition particle and docking protein independence of, structural basis for) Biological transport (absorption, of prepromellitin by endoplasmic reticulum, signal recognition particle and docking protein independence of, structural basis for) Proteins, specific or class RL: BIOL (Biological study) (docking, prepromellitin import by endoplasmic reticulum independence of, structural basis for) Proteins, specific or class RL: PROC (Process) (fusion products, construction of) Peptides, biological studies RL: BIOL (Biological study) (signal, in protein import by endoplasmic reticulum, signal recognition particle and docking proteins dependence in relation to) Ribonucleoproteins RL: BIOL (Biological study) (signal recognition, prepromellitin import by endoplasmic reticulum independence of, structural basis for) 87608-85-3 RL: BIOL (Biological study) (absorption of, by endoplasmic reticulum, signal recognition particle and docking protein independence of, structural basis for) 9002-03-3D, Dihydrofolate reductase, -prepromellitin chimeric proteins 87608-85-3D, -dihydrofolate reductase chimeric proteins RL: PRP (Properties) (construction and amino acid sequences of) 87608-85-3 RL: BIOL (Biological study) (absorption of, by endoplasmic reticulum, signal recognition particle and docking protein independence of, structural basis for) 87608-85-3 HCAPLUS Melittin, prepro- (honeybee) (9CI) (CA INDEX NAME) *** STRUCTURE DIAGRAM IS NOT AVAILABLE *** 87608-85-3D, -dihydrofolate reductase chimeric proteins RL: PRP (Properties) (construction and amino acid sequences of) 87608-85-3 HCAPLUS Melittin, prepro- (honeybee) (9CI) (CA INDEX NAME) *** STRUCTURE DIAGRAM IS NOT AVAILABLE *** ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN 1983:570598 HCAPLUS

Nucleotide sequence of cloned cDNA coding for honeybee prepromelittin

```
Vlasak, Reinhard; Unger-Ullmann, Claudia; Kreil, Guenther; Frischauf, Anna
ΑU
     Inst. Molekularbiol., Oesterr. Akad. Wiss., Salzburg, A-5020, Austria
CS
     European Journal of Biochemistry (1983), 135(1), 123-6
     CODEN: EJBCAI; ISSN: 0014-2956
DT
     Journal
     English
LA
CC
     3-4 (Biochemical Genetics)
     Section cross-reference(s): 12
     Total mRNA from venom glands of young queen bees was transcribed into cDNA
AB
     and cloned into the PstI site of plasmid pBR322. The nucleotide sequence
     of 2 clones with inserts containing genetic information for prepromelittin
     [66369-20-8] is presented. The longer insert encompasses 374 base pairs,
     including 52 nucleotides before the initiation codon, and a 3' noncoding
     region of 112 base pairs. The 70 amino acids of prepromelitin represent
     the total coding capacity of the mRNA from which this insert is derived.
     Southern blot anal. with this cloned cDNA showed that it hybridizes with a
     single EcoRI fragment of honeybee DNA which contains .apprx.3000 base
     pairs.
     prepromelittin cDNA cloning sequence honeybee; melittin cDNA sequence
ST
     honeybee; gene melittin honeybee
     Gene and Genetic element, animal
IT
     RL: PROC (Process)
        (for melittin, of honeybee, localization of)
ΙT
     Honeybee
        (melittin-sp. mRNA of, cloning and sequence of DNA complementary to)
IT
     Protein sequences
        (of melittin, of Apis mellifera, complete)
IT
     Molecular cloning
        (of melittin-sp. DNA complementary to honeybee mRNA)
IT
     Protein sequences
        (of prepromelittin, of Apis mellifera, complete)
IT
     Protein sequences
        (of promelittin, of Apis mellifera, complete)
ΙT
     Ribonucleic acids, messenger
     RL: BIOL (Biological study)
        (melittin-specifying, of honeybee, cloning and sequence of DNA
        complementary to)
IT
     Deoxyribonucleic acid sequences
        (melittin-specifying, of Apis mellifera, complete)
ΙT
     20449-79-0
                87608-81-9 87608-85-3
     RL: PRP (Properties)
        (amino acid sequence of)
IT
     87659-04-9
     RL: PRP (Properties); BIOL (Biological study)
        (nucleotide sequence of)
IT
     66369-20-8
     RL: PRP (Properties)
        (of honeybee, cloning of cDNA for)
IT
     37231-28-0
                 37231-70-2
     RL: PRP (Properties)
        (of honeybee, sequence of)
IT
     87608-85-3
     RL: PRP (Properties)
        (amino acid sequence of)
RN
     87608-85-3 HCAPLUS
     Melittin, prepro- (honeybee) (9CI) (CA INDEX NAME)
CN
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
=> => fil reg
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=> s 87608-85-3

L17 1 87608-85-3

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=> s 117 and 11

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L18 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN

RN 87608-85-3 REGISTRY

CN Melittin, prepro- (honeybee) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 70

SEQ 1 MKFLVNVALV FMVVYISYIY AAPEPEPAPE PEAEADAEAD PEAGIGAVLK

51 VLTTGLPALI SWIKRKRQQG

========

HITS AT: 62-70

RELATED SEQUENCES AVAILABLE WITH SEQLINK

IF C350 H552 N84 O99 S2

CI MAN

LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: BIOL (Biological study); PRP (Properties) RLD.NP Roles for non-specific derivatives from non-patents: PRP (Properties)

2 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 107:149380

REFERENCE 2: 99:170598